

# Ultra Feather Touch



- ▶ Ultra low 0.03N - 0.06N tip force
- ▶ 0.06% of reading accuracy
- ▶ Compact package
- ▶ Different tips available, including Nylon, Ruby and Flat

## Description

Solartron Metrology, the world leader in digital gauging systems, now offers the Ultra Feather Touch probe, a sensor with so light a tip force, 0.03N - 0.06N Newtons (3 - 6 grams), it is a viable alternative to a non-contact sensor. With various tips available in ruby and nylon, the UFT is already being used to check glass, rubber, semi-conductor wafers, and other delicate materials.

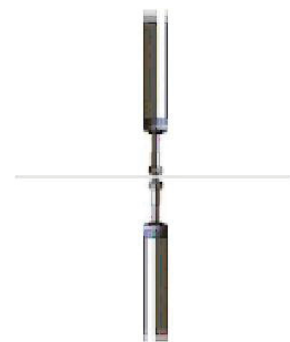
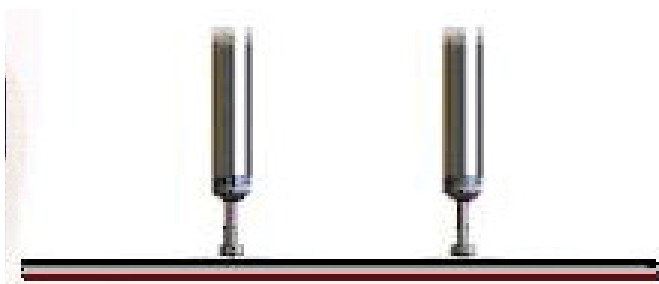
Like other Solartron probes, the 10mm stroke UFT carries an ultra precise 0.06% of reading accuracy, along with a 0.15  $\mu\text{m}$  repeatability, and 0.01  $\mu\text{m}$  resolution. A Laser or other non-contact sensor with those stats would cost thousands more. Also, its compact 8mm diameter package enables more points within a small area to be measured.

The Solartron Ultra Feather Touch probe is available in both spring and pneumatic, and will connect with Analog, Orbit, and Orbit ACS systems.

Please note, the Ultra Feather Touch due to the lighter, thinner stem, does not respond well to sideloads.

## Drawings

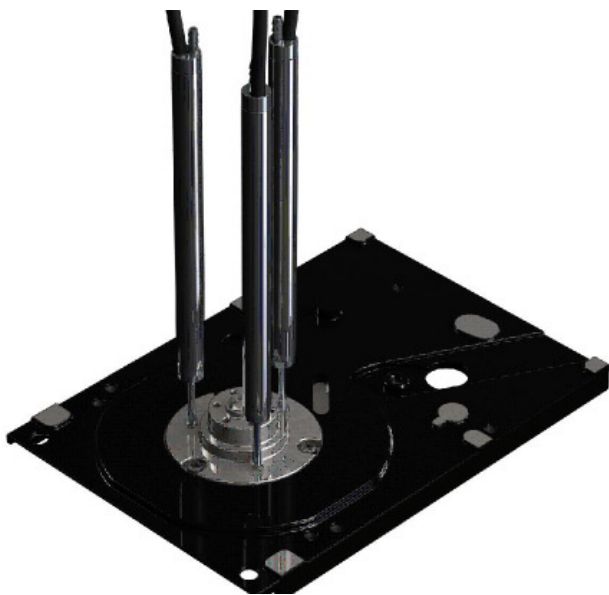
Semi-conductor thickness measurement



Use the Ultra Feather touch probe to check thickness of glass

Drawings

UFT probes checking cell phone glass. Instead of scanning, four points can be checked immediately.



Three UFT probes are being used to check a component on a Hard Disk Drive casting, where it would be too difficult to fit three Laser Triangulation boxes into such a small space.

For 3D drawings please contact [sales.solartronmetrology@ametek.com](mailto:sales.solartronmetrology@ametek.com)

### Technical Specification

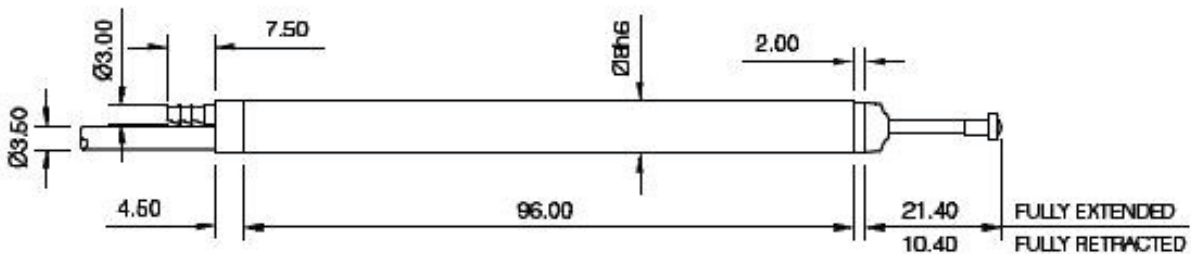
Measurement performance	DW/10/P
Body Diameter	8h6
Measurement range	10 mm
Pre-travel	0.15 mm
Over travel	0.85 mm
Accuracy (% of reading)*	0.06
Repeatability	0.15 µm
Tip Force @center of travel	0.03N to 0.06N (spring) & 0.03N to 0.06N at 0.4 bar (pneumatic)
Resolution (user selectable)	< 0.01 µm
Data speed (Orbit)	Up to 3906 readings/s
<b>Mechanical</b>	
Probe material	Stainless Steel
Standard tip material	Tungsten Carbide or Nylon
Standard cable length and type	2m PUR**
Operating Life	13 million cycles (application dependent)
Maximum operating pressure	1 Bar (14.5 psi)
<b>Environmental</b>	
IP rating	IP 40 for module + Probe
Operating Temp Range	0 to 85°C (Probe) 5 to 55°C (Module)
Storage Temp Range	-20 to 70°C
<b>Digital probe interface electronics</b>	
Bandwidth	Up to 460 Hz
Output	Serial RS 485 signal level Solartron Orbit protocol
Power (VDC)	5VDC ± 0.25@ 0.06A (Includes power for probe)
Available interface modules	USB, Ethernet, RS232

\* Accuracy for Orbit and Orbit ACS systems.

\*\* Different cable lengths are available, 10 m max. Cable can also be steel or plastic braided.

Drawings

**Ultra Feather Touch Pneumatic Push (DW/10/P)**



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Solartron pursues a policy of continuous development. Specifications in this document may therefore be changed without notice.